

UNITED STATES-ASIA ENVIRONMENTAL PARTNERSHIP

US-AEP RESOURCE



GUIDE

Linking Asia
& the United States
for the betterment
of the global environment

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Note: Services are organized in this guide by the primary beneficiary, whether Asian or American. In all activities, however, US-AEP seeks to build partnerships between U.S. and Asian participants.

What is US-AEP?

The United States-Asia Environmental Partnership (US-AEP) is a public-private and interagency partnership of the U.S. Agency for International Development (USAID) with the Department of Commerce, the U.S. Environmental Protection Agency, other U.S. government and state agencies, and the private sector. Created in 1992 by a Presidential initiative, US-AEP promotes the adoption of clean, efficient technologies, policies and practices by Asian industries, cities, and governing entities. The context of US-AEP's engagement is economic, as well as environmental, harnessing the broad-based desire in Asia for accelerated but cleaner economic growth to drive a 'clean revolution' US-AEP's approach is to pursue sustainable change in the way Asia proceeds with



the industrial and urban growth needed to address poverty through a development assistance approach founded on two basic premises:

- to form a nexus between sustainable development, environment, and trade to the mutual benefit of Asian countries and the United States; and
- to create and promote lasting partnerships by country, regionally, and internationally, that will carry on beyond the reach and longevity of development agencies.

US-AEP's approach to fostering a transformation to clean growth is to engage key decision-makers in the public and private sectors, and harness those forces which serve as incentives for change: market, political, corporate, regulatory, and public advocacy. Ultimately, the future of the environment in Asia will be determined by these key Asian decision-makers,

including individuals, institutions, and the public.

US-AEP targets four main areas related to the interdependent goals of environmental quality and economic growth:

- public policy and environmental regulations;
- urban environmental management;
- corporate governance and environmental management; and
- the transfer of U.S. environmental technology, expertise and practices through technology cooperation.

Woven throughout these four areas is an emphasis on energy and resource efficiency and other measures that reduce greenhouse gas emissions, and thereby mitigate the impact of developing Asia on global climate change.

In order to leverage resources from outside the U.S. government and to create self-sustaining partnerships that outlive development assistance, US-AEP enlists the expertise and commitment of U.S. and Asian stakeholders: professional associations, large multinational corporations, small- to medium-sized U.S. private sector firms, U.S. states and Asian and American municipalities and non-governmental organizations. Through the partnership of USAID and the Department of Commerce, Asia's environmental quality and economic growth are mutually advanced by connecting Asia's decision-makers with the best in American environmental technology and expertise.

US-AEP's engagement with a wide variety of partners serves another key component of the US-AEP vision: supporting U.S. foreign policy interests and fostering improved international relations in many sectors of American society. By facilitating the active participation of the business community and public sector at state and municipal levels, US-AEP makes development assistance relevant to Americans not directly concerned with international relations. ♦

[OVERVIEW of RESOURCES]

If you are an Asian in search of environmental solutions ... or an American seeking ways to access the Asian environmental market ... US-AEP is for you.

How? Through a wide range of tools, services, and access to people with know-how. Read on for a brief summary of services. More details and complete contact information are provided in the following pages.

◆ Environmental business services

Technology representatives: US-AEP's "Tech Reps" are environmental and commercial specialists located in 6 Asian countries. They are available to help locate appropriate, targeted solutions to environmental problems and counsel U.S. companies on ways to compete in the growing Asian environmental market.

Trade leads: US-AEP representatives seek out Asian environmental needs in which American technologies and services may be of assistance. These trade leads are distributed free of charge to U.S. firms.

Urban environmental infrastructure

representatives: US-AEP's "Urban Reps" specialize in helping to solve the problems of Asia's urban areas—such as providing clean water, treating wastewater, and disposing of solid and hazardous wastes. Located in three Asian countries, Urban Reps can help locate appropriate U.S. solutions to address urban needs.

Asian Development Bank (ADB) representative:

A commercial environmental specialist based in Manila, Philippines, targets environmental opportunities and partnerships through the Asian Development Bank.

Turn to page 6 for more information on US-AEP's environmental business services.

◆ Grants

US-AEP offers several types of grants to foster lasting partnerships for sustainability among Americans and Asians.

See page 8 for more information on grants and application procedures.

◆ Exchanges

US-AEP's Environmental Exchange



US-AEP Tech Reps at the 2000 semi-annual meeting in Hong Kong.

Program (EEP) facilitates face-to-face encounters for Americans and Asians, enabling them to share information about Asia's environmental problems and techniques to address them. EEP offers partial subsidies for travel costs and develops technical itineraries for participants.

Several types of exchanges are offered; for more information, see page 12.

◆ Networking opportunities

US-AEP helps establish enduring networks of Asian environmental professionals, through which efficient use of resources and American environmental techniques are promoted.

For more information on networking opportunities, see page 14.

◆ Technical assistance and training

At the request of Asian governments, US-AEP provides technical assistance and training on environmental topics.

Find out more about technical assistance and training on page 16.

No developed country is without it, and nowhere are its effects more visible than in the developing countries of Asia. As rapid Asian industrialization continues, environmental deterioration threatens human health, economies, and entire ecosystems.

However, signs of reform indicate that Asia is poised for a 'clean revolution.' As people across the region push for environmental improvements, Americans -- recognizing their stake in Asia's environmental and economic health -- are sharing knowledge and technologies developed through battling pollution problems of their own.

Over the years, thousands of Asians and Americans have come together through US-AEP's business counseling, exchanges, networking opportunities, technical training, and other activities.



[ENVIRONMENTAL BUSINESS SERVICES]

for Asians and Americans

◆ Technology Representatives

US-AEP Technology Representatives, or "Tech Reps," are trained environmental and commercial specialists that provide business counseling to Asians and Americans. Through a variety of activities, they help to link prospective business partners and identify innovative, cost-effective solutions to environmental problems.

Tech Reps are located in 6 Asian priority economies: India, Indonesia, the Philippines, Sri Lanka, Thailand, and Vietnam.

Each year, Tech Reps assist hundreds of local government officials and Asian firms who are seeking environmental technology solutions. Tech Reps also provide business counseling to American firms and serve as advocates for appropriate U.S. environmental technologies.

How Asians can participate: Tech Reps can



Mr. Robert Morriss of U.S. firm Bio-Genesis (Diamond Bar, California) has used several US-AEP services to achieve sales success in Asia.

play a key role in finding appropriate environmental technologies and services. Contact the Tech Rep who represents your country, as listed on the contacts sheet in the back of this guide.



Dr. Bhichit Rattakul, former governor of Bangkok, Thailand, is working with US-AEP's urban experts to improve life in his city.

How Americans can participate: Tech Reps can help make connections with Asian partners and advocate U.S. technologies and services. Contact the Tech Reps listed on the contacts sheet in the back of this guide for the countries in which you wish to do business.

◆ Trade leads

Trade leads for environmental goods and services are identified by Tech Reps during their work with Asian governmental officials and companies. When a solid lead is obtained, details on the Asian buyer, environmental concern, and proposed technology solutions are sent to the Environmental Technology Network for Asia (ETNA) for dissemination to American firms. Trade leads are distributed free of charge via fax to U.S. companies that are registered with

ETNA. Currently, more than 2,700 firms are registered to receive leads.

Established in 1993, ETNA is an initiative of US-AEP and the Global Technology Network (GTN) of the United States Agency for International Development (USAID). ETNA has disseminated about 5,800 distinct leads to U.S. companies, through which \$58.3 million in sales and services have been generated, as well as joint venture and distributorship agreements.

How Asians can participate: To inform US-AEP of a need for U.S. environmental technologies, contact the Tech Rep who represents your country, as listed on the contacts sheet in the back of this guide.

How Americans can participate: To register to receive trade leads, contact ETNA, as listed in the back of this guide.

◆ Urban representatives

US-AEP's Urban Environmental Infrastructure Representatives ("Urban Reps") are available to provide business counseling on urban issues, such as provision of clean water, treatment of wastewater, and disposal of solid and hazardous wastes.

They provide similar services as US-AEP's Tech Reps but focus on building viable municipal services in Asia. Urban Reps are located in three cities: Ahmedabad, India; Jakarta, Indonesia; and Bangkok, Thailand. These offices are supported and managed by the U.S. Agency for International Development (India and Indonesia) and Kenan Institute Asia (Thailand).

US-AEP's urban infrastructure team also includes the American Consulting Engineers Council (ACEC), the United States' largest national organization of engineers engaged in the independent

US-AEP offers a number of free business services to help Asian and American business partners connect—and develop mutually beneficial relationships.

practice of consulting engineering. Through its regional office in Manila, Philippines, ACEC works closely with US-AEP representatives, facilitating public-private partnerships that link Asia's urban engineering needs with qualified U.S. member firms.

◆ Asian Development Bank representative

A US-AEP-funded commercial environmental specialist, located in Manila, Philippines, targets environmental opportunities and partnerships through the Asian Development Bank (ADB).

How Asians can participate: US-AEP can help develop strategic alliances for sustainable urban development, track and evaluate projects, and more. See the Urban Program section on the contacts sheet in the back of this guide. *How Americans can participate:* US-AEP can identify business opportunities, help locate project funding, and more. See the Urban Program section on the contacts sheet in the back of this guide.

[GRANTS]

for Asians and Americans

◆ Grants for Asians and Americans

State Environmental Initiative

The State Environmental Initiative (SEI), a matching-grants program, provides up to \$150,000 to U.S. state agencies in order to link American management, policy, regulatory, and technological expertise with Asian demand for environmental improvements. Since its inception in 1994, SEI has awarded \$3.8 million in grants to states, matched by participants with contributions of more than \$7 million, and has resulted in more than \$5 million in confirmed U.S. sales to Asian countries. Further, SEI facilitates long-term, mutually beneficial international partnerships.

Eligibility

Once a year, SEI's administrator—the Council



Children in Muntinlupa, Philippines. A State Environmental Initiative project is improving the environmental performance of industries located along the area's Palico Creek.

SEI in action:

State of Vermont and Indonesia protect Lake Toba.

With the support of an SEI grant, a lasting partnership has evolved between U.S. organizations in Vermont and their counterparts in Indonesia. This partnership has enabled the Vermont Agency of Natural Resources and the Lake Champlain Basin Development Program to work closely with Indonesian government officials to improve the health of Indonesia's Lake Toba. In one related activity, 22 Indonesian officials visited Vermont's Lake Champlain to learn about clean technologies in use by industry to protect the lake's water quality.

Through this project, Americans continue to help Indonesian officials apply the Lake Champlain management model to Lake Toba. It is expected that these efforts will eventually facilitate transfer of appropriate U.S. technology. ◆

of State Governments—solicits proposals from U.S. state government agencies, such as environmental and pollution prevention offices, economic development agencies, and export trade offices. Although the proposal must be crafted by the state organization, applicants are encouraged to draw on multiple resources, such as nongovernmental organizations, university research and development projects, private sector firms, and existing public-private partnerships for environmental protection.

Grant size and match

SEI grants are awarded in amounts up to \$150,000. All applicants who receive funding, regardless of the amount, must match the grant funds with a 2:1 or 1:1 ratio. The match ratio varies depending on the development status of the country proposed as a partner.

Grant activities

Several categories of activities are eligible for SEI funding. Grants may be used to



Indonesia's Lake Toba, where a State Environmental Initiative grant has fostered the development of a lasting "sister lakes" partnership with the state of Vermont.



SEI projects bring the expertise of America's states to Asia, to help solve environmental and energy problems.

help disseminate clean technology and foster environmental management; develop urban environmental infrastructure; or help establish a policy framework to support sustainable development.

Funded projects are expected to address such issues as policy, technology and infrastructure, research, community involvement, culture, investment, and implementation.

How Asians can participate: Asians can suggest project ideas either to the Tech Rep in their country or to the program managers of US-AEP's urban, policy, and CTEM components. For contact information, refer to the contacts sheet in the back of this guide.

How Americans can participate: Contact the Council of State Governments at 2760 Research Park Dr., Lexington, KY 40511-8410. Tel: 606-244-8234. Fax: 606-244-8001. Website: www.sei-asia.org.

Grants • for Asians and Americans

US-AEP offers several types of grants—ranging from \$20,000 to \$150,000—to help Asians and Americans build long-term partnerships that contribute to environmental and economic sustainability in the Asian region.

◆ Grants for Asians and Americans

Overseas Program Fund

The Overseas Program Fund (OPF) offers up to \$25,000 to enable Asians



The Overseas Program Fund enabled almost 100 Asians to participate in WasteExpo '99 in Texas, where they studied U.S. waste management techniques. Here, delegates tour Ecogas, a

and Americans to participate in events in a potential trading partner's home country; for example, facility tours, product demonstrations, one-on-one

US-AEP Overseas Program Fund in Action:

Bringing Asian Consumers and U.S. Environmental Firms Together

The US-AEP Overseas Program Fund (OPF) and Environmental Exchange Program (EEP) enabled 162 Asian buyers to meet with U.S. companies and tour facilities to learn about the latest wastewater treatment technologies and services at the Water Environment Foundation's WEFTEC 2000 Trade Show. James Warner, Sales Manager for Seychelle Environmental Technologies Inc. in Temecula, California took advantage of the one-on-one meetings with US-AEP Asian delegates and US-AEP Tech Reps.

As a result, Mr. Warner plans to travel to Sri Lanka next month to seal a business deal. Commenting on the effectiveness of US-AEP programs, Mr. Warner said, "Small to medium size businesses would have a difficult time doing business internationally without the support of government programs...I am glad to pay my taxes." Overall, more than 650 meetings took place that could lead to potential success stories and sales, and reflect the strengthened partnership between WEF and US-AEP.

business meetings, trade shows, and video conferences. These activities are managed for US-AEP by the National Association of State Development Agencies (NASDA), while US-AEP Technology Representatives in Asia ensure that participants meet qualified potential business partners.

How Asians can participate: Asians may visit the United States to participate in projects organized by US-AEP Tech Reps. To participate in one-on-one business meetings with U.S. firms, technical facility tours, or trade shows, contact the Tech Rep who represents your country, as listed on the contacts sheet in the back of this guide. *How Americans can participate:* OPF assists U.S. companies that wish to participate in Asian conferences and meetings, tour facilities, and host Asian delegations. Contact the OPF administrator, National Association of State Development Agencies at 750 First St., NE, Suite 710, Washington DC 20002. Tel: 202-898-1302. Fax: 202-898-1312. Website: www.nasda.com.

◆ Grants for Asians

NGO-Business Environmental Partnership

Launched in 1996, the NGO-Business Environmental Partnership provided grants of up to \$30,000 to Asian nongovernmental organizations (NGOs) to encourage collaborative environmental improvement efforts with Asian industry. This program is managed by The Asia Foundation.

Although grants are not being awarded at this time, the most successful of the 53 grant-funded partnerships facilitated by the program are now being replicated across Asia. Nine “flagship” project leaders will share their success stories and partnership tips with other Asian NGOs and businesses. For example, the Wisnu Foundation’s hotel waste management project in Bali, Indonesia,

has become self-supporting through fees collected from the hotels, and the Society for Environment and Human Development in Bangladesh has published a report on pollution mitigation in the leather industry. The report is being sold in Bangla and English translations to raise funds.

How Asians can participate: Contact the program’s administrator: The Asia Foundation, 465 California Street, 14th

Floor, P.O. Box 193223, San Francisco, California 94104. Tel: 415-982-4640. Fax: 415-392-8863, E-mail: cplante@asiafound.org. Website: www.asiafoundation.org.



Mango processing at Peddireddy Thimma Reddy Farm Foundation, Hyderabad, India. A US-AEP NGO-Business Environmental Partnership project reduced solid waste at this facility by 90%.

[EXCHANGES]

for Asians and Americans

US-AEP's Environmental Exchange Program (EEP), administered by the Institute of International Education (IIE), promotes information sharing about Asia's environmental needs and American techniques to address them.

The EEP helps Asians and Americans travel to each others' home countries, enabling face-to-face discussion of environmental problems and solutions. EEP arranges logistics for participants and provides limited financial assistance to help defray the cost of travel. Three types of exchanges are provided: environmental business exchanges, technical exchanges, and environmental fellowships.

◆ Environmental business exchanges

Through business exchanges, Americans



Ms. Diane Shew, president of Waste Alternatives, Inc., in Ohio, used the EEP to participate in an industrial waste exchange seminar in Taiwan.

may travel to Asia, and Asians to the United States, to conduct meetings and explore partnerships. These exchanges may involve a single individual or a study tour of 10-20 people. Duration is typically less than two weeks.

For Americans, business exchanges facilitate

travel to a targeted Asian country and enable them to personally introduce their products and services to Asian decision-makers. For Asians, these exchanges provide opportunities to identify sources for U.S. technologies; observe and evaluate facilities first-hand; and meet with potential American trading partners.



Dr. Alka Karande, Mumbai Municipal Corporation, was a member of an Indian medical waste study tour delegation.

◆ Technical exchanges

These short-term workshops are held either in the U.S. or Asia. For Americans, technical exchanges provide an opportunity to showcase U.S. products and expertise for an audience of influential Asian decision-makers. For Asians, they are an effective means of locating technologies and services

to meet environmental needs.

◆ Environmental fellowships

Environmental fellowships provide an opportunity for senior-level American and Asian professionals to work with peers in the counterpart's home country. Typically lasting from four to eight weeks, these fellowships focus on identifying practical solutions to existing environmental problems.

For example, an environmental fellowship could enable an American to work for an Asian government in an environmental ministry or for a private company. Or, the fellowship might be used to bring an Asian professional to work side-by-side with peers in the United States. Participants may also be placed with nongovernmental organizations (NGOs) or government agencies at the local, state, or national levels.

◆ Cost sharing

EEP provides funds to partially cover travel, lodging, and other limited expenses. When EEP funding is provided, U.S. government travel regulations and per diem rates must be observed. Participants' home organizations should cover salary



In June 1999, the EEP brought a dozen Indian municipal leaders to learn about waste management techniques in the United States. Here, two delegates discuss the tour with then US-AEP India Country Director, Therese Leasburg.

By providing opportunities for Asians and Americans to meet face to face, US-AEP's Environmental Exchange Program (EEP) promotes information sharing about Asia's environmental needs and American techniques to address them.

Since May 1995, the exchange program has conducted more than 3,000 exchanges in 15 countries in the Asia region, as well as the United States.

and international travel costs for their employees. Exchange applications must include a budget proposal stipulating proposed cost-sharing arrangements.

How Asians can participate: Contact an EEP field representative or your in-country Tech Rep, as listed on the contacts sheet in the back of this guide. How

Americans can participate: Contact EEP/IIE, Attn:

Admin. Manager,
1400 K St., NW,
Suite 650,
Washington, DC
20005-2403. Tel:
202-326-7706. Fax:
202-326-7709.

E-mail: eed@iie.org. Website: www.iie.org.



EEP enabled a group of Filipino government officials to examine U.S. technologies for solid waste management.

[NETWORKING]

for Asians

US-AEP supports the development of environmental associations in Asia. The goal: to provide Asian environmental professionals with access to technical and professional resources as well as affiliation with an international environmental network.

US-AEP provides funding to two U.S. associations—the Air & Waste Management Association (A&WMA) and the Water Environment Federation (WEF)—to help them expand their activities in Asia. Both associations have developed viable country-based, environmental professional associations similar to and affiliated with their American counterparts.

◆ Air & Waste Management Association

Founded in 1907, the Air & Waste Management Association (A&WMA) focuses on solving problems of air



Mr. Al Goodman, president of WEF, played an integral role in establishing WEF's chapter in the Philippines, helping to form linkages between Filipino and American water professionals.

pollution and waste management. Its membership comprises 16,000 industrialists, researchers, equipment manufacturers, government control personnel, educators, meteorologists, and others from government and industry. Through member units, A&WMA seeks to foster the exchange of information on air



Dr. Frank S.C. Lee, assistant professor at Hong Kong Polytechnic University, was chair of the A&WMA Hong Kong section during the 1996-98 term. Under his leadership, the Hong Kong chapter became a "sister" organization with the San Francisco

pollution, waste management, and general environmental issues. A&WMA is now in its fourth year of activity with US-AEP. The association has built networks of environmental professionals, or sections, in Hong Kong, Korea, the Philippines, and Taiwan. Altogether, these sections have delivered almost 50 technical programs (conferences, workshops, and seminars) to more than 3,000 participants.

◆ Water Environment Federation

The Water Environment Federation (WEF), an association founded in 1928, is committed to enhancing and preserving water quality and resources. Through more than 41,000 members, WEF promotes better management of domestic and industrial wastewater. WEF member associations are currently located in seven countries in the Asia/Pacific region: India, Korea, Taiwan, Japan, the Philippines, New Zealand, and Australia.

◆ Membership benefits

Members of A&WMA and WEF chapters in Asia accrue several important benefits:

- Linkage with A&WMA and WEF in the U.S. and other Asian associations,
- Relationship-building opportunities with local environmental professional leaders and activists,
- Professional development and certification support,
- Access to newsletters, publications, and public education programs, and
- Invitations to annual conferences and exhibitions, training courses, workshops, and regional meetings.

◆ The International City/County Management Association

The International City/County Management Association (ICMA), a professional and educational organization, offers programs providing training and expertise in environmental management to local governments. With the assistance of US-AEP, ICMA is establishing an International Resource Cities program to share skills and successes of U.S. local governments with those of Asia and the developing world. In 18 to 24 month programs, U.S. cities provide assistance to improve management, support participatory governance and economic development, and improve delivery of environmental services to Asian communities.

Through the Air & Waste Management Association, the Water Environment Federation, and the ICMA, US-AEP offers opportunities for Asian environmental professionals to reap the benefits of an international network.

◆ The Alliance to Save Energy

The Alliance to Save Energy (ASE) uses education, research, and advocacy programs to publicize the benefits of energy efficiency and move the world to a more sustainable future. In partnership with US-AEP, ASE is working on the Sustainable Cities Initiative in India, implementing projects to address India's growing energy demand. Using Energy Monitoring Cells and other management systems, ASE and local partners are reducing energy consumption, promoting efficient energy use, and reducing the emission of green house gases in India.

◆ Environmental Exchange Program

US-AEP's Environmental Exchange Program (EEP) provides Asian environmental professionals with the logistical support and financial assistance that is sometimes needed to interact face-to-face with regional and international counterparts.

How Asians can participate in networking activities: Refer to the contacts sheet in the back of this guide to get in touch with the program administrators of A&WMA, WEF, ICMA, and ASE.

[TECHNICAL ASSISTANCE]

for Asian governments

US-AEP provides technical assistance and training at the special request of Asian governments. These services are provided through an interagency agreement with the U.S. Environmental Protection Agency (EPA).

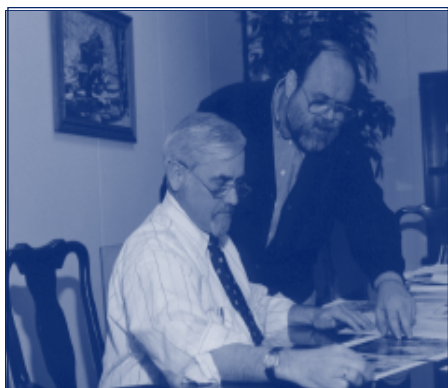
◆ U.S. Environmental Protection Agency

EPA's efforts with US-AEP focus on five critical environmental topics: addressing global climate change; providing safe drinking water and wastewater treatment; reducing urban air pollution; promoting solid waste management (including medical waste and landfill methane recovery); and participating in regional policy projects on

performance metrics, environmental management systems, and public disclosure. These topics are addressed through EPA's environmental action teams, technical assistance teams, and training.

Environmental action teams

These EPA teams are dispatched to analyze and help solve pollution problems in Asia as identified by local officials. For example, one EPA team helped officials of the province of Cebu, Philippines, clean up the seriously polluted Butuanon River. The project culminated with the development and implementation of a long-term watershed



Dr. Lester Grant (seated) of the U.S. Environmental Protection Agency analyzed the human health effects of the 1997/98 Indonesian biomass fires as part of a US-AEP-funded technical assistance program. See sidebar.

EPA in action: *Asian leaders learn forest fires' effects.*

Through US-AEP, the U.S. EPA conducted an April 1999 Regional Workshop on Particulate Matter (PM) 2.5 in Singapore.

The event focused on tracking tiny airborne particles that pose serious human health risks when inhaled. Sixty regional government officials attended the workshop, which was a follow-up to a 1997-98 EPA technical assistance program to analyze the effects of Indonesian biomass fires on human health in the region. ◆

management plan.

Technical assistance teams

Like environmental action teams, technical assistance teams are provided by EPA at the request of Asian governments. However, these missions are shorter in duration and—because technical and policy experts undertake these activities on a pro bono basis—can

US-AEP and Phasing Out Leaded Gasoline in Asia

The continued use of leaded gasoline creates pollution and public health problems for Asian nations. US-AEP's effort, in partnership with USEPA, the Asian Development Bank and the World Bank, to encourage Asian nations to phase out leaded gasoline, has achieved several notable successes in the past two years. Work on eliminating leaded gasoline in the Philippines began in 1993, and culminated in the Clean Air Act of 1999, which legislated the phase out of leaded gas in Metro Manila early in 2000, and in the entire country by the end of the year. In addition, US-AEP helped coordinate an outreach campaign to mobilize public support for the Clean Air act and educate citizens on the benefits of phasing out leaded gasoline.

Success in the Philippines was mirrored by successes in Vietnam. An Environmental Exchange Program grant allowed Vietnamese officials to travel to Thailand, and learn methods and specific actions they could take for eliminating leaded gasoline from their Thai counterparts. As a result the government of Vietnam accelerated the phasing out of leaded gasoline from 15 years to 6 and has begun planning a public outreach campaign to build support for the program, demonstrating the significant public health and economic benefits of eliminating leaded gasoline.

Technical assistance • for Asians

To help Asian governments solve particular environmental problems, US-AEP provides technical assistance and training through the U.S. Environmental Protection Agency.



Thai air monitoring official testing truck emissions in Bangkok. USEPA trains air quality officers throughout Asia

only be provided when staff availability allows.

Training opportunities

US-AEP sponsors a variety of EPA-led environmental management training modules for Asian governments. Courses cover such topics as environmental impact assessment, medical waste management, economic incentives, and environmental audits

How Asian government officials can engage the services of EPA: Contact your country's Tech Rep, as listed on the contacts sheet in the back of this guide. For more information from EPA, contact: EPA/Asia Program Manager, U.S. Environmental Protection Agency (2621). 401 M Street, SW, Washington, DC 20460. Tel: 202-260-4174. Fax: 202-260-4470.

[US-AEP FOCUS AREAS]

US-AEP activities further the goals of one or more of the program's four focus areas: policy, urban programs, industrial programs and technology cooperation.

◆ Policy

US-AEP's policy activities, led by the Policy Group, support an industrial and urban

transformation in Asia through five main initiatives:

Framing a policy agenda

Asian and American organizations are working together to frame a policy research agenda. This agenda will lay the groundwork for an international dialogue on policy directions that are crucial to sustainable development:

- Measurement of industrial environmental performance,



US-AEP's Policy Group worked closely with Asian decision-makers to help establish an Asian node of the Greening of Industry Network in Bangkok, Thailand. Located at Chulalongkorn University, GIN-Asia is managed by Dr. Somporn Kamolsiripichaiporn (right) and has attracted the attention of Asian leaders such as Melito Salazar, Jr. (above). Undersecretary of the Philippine Department of Trade and Industry, Prof. Salazar participated in GIN-Asia's 1998 launch.

- Investment and technology transfer,
- Public policy to improve environmental performance,
- Globalization and industrial environmental performance,
- Civil society and industrial environmental performance, and
- Urban environmental performance.

Catalyzing an international policy network

The Policy Group supports organizations that promote discussion of policy issues as well as approaches that advance environmental progress in Asia. Notable partners in this area include the Greening of Industry Network, an international research and policy network of government ministries, research groups, corporations, and NGOs, and the Global Reporting disclosure of environmental performance information

Because effective public disclosure policies go hand in hand with improved industrial environmental performance, the Policy Group promotes information sharing on environmental practices with all stakeholders. For example, the success of Indonesia's Program for Pollution Control, Evaluation, and Rating (PROPER) demonstrated how the media and public opinion can bring about improved industrial compliance with environmental regulations. US-AEP began working with BAPEDAL in 1997. The Policy Group also facilitates seminars and workshops on disclosure of environmental performance information for Asian participants.

Measuring industrial environmental performance

The ability to measure environmental performance is a crucial prerequisite to helping industry reduce its pollution intensity. To this end, the Policy Group is building a universal framework for measuring industrial environmental performance and examining its use in formulating corporate and public policy.

To contact the Policy Group, refer to the contacts sheet in the back of this guide.

US-AEP focus areas • Policy in action

In January 2001 US-AEP launched the Environmental Regulatory dialogue in January 2001 through an international forum organized in collaboration with the Thai Ministry of Science, Technology and Environment (MoSTE) for 200 legal and regulatory practitioners, including supreme court justices from Thailand, India, Sri Lanka, and the Philippines. In addition to developing national action agendas in enforcement and compliance, public participation, economic instruments, and legal reform, the forum highlighted the role of the judiciary in promoting sustainable development.

Building on this forum, US-AEP is working with a range of Thai agencies and organizations to implement the action agendas. For example, US-AEP is working closely with senior judges from the Administrative Court to build court capacity in handling environmental cases. In addition, through work with the Council of State, Thailand's legal drafting agency, US-AEP has been instrumental in ensuring that Thailand's new Public Consultation Act reflects international best practices



Bangkok, Thailand—one of the cities where US-AEP focuses the efforts of its Urban Program.

◆ Urban Programs

Rapid urbanization in Asia puts undue pressure on urban environments. Cities are plagued with congestion and pollution, and lack the infrastructure necessary to accommodate growth. Asia's rapid urban expansion is an opportunity for US-AEP to provide technical assistance and institutional capacity building, in an effort to move Asia's cities towards improved environmental management and sustainable development. The Urban Program works in three strategic areas:

Urban Environmental Dialogue

Asian officials are learning that good environmental policy means an improved economy. Local and regional planning efforts are being pursued to address the growing environmental problems facing Asian cities. US-AEP's role is to facilitate the development of networks and forums focused on continuous urban environmental dialogue.

There are three important levels to a comprehensive urban environmental dialogue. First, it is an international discussion focused on innovative strategies and shared best practices and technologies.

Second, it includes a regional dialogue focused on policy initiatives that would enhance environmental conditions as a whole. And finally, it must have an outreach component that provides education for local communities and promotes citizen participation in the dialogue. The engagement of these various stakeholders results in collaborative and demand-driven strategic plans to improve urban environments.

Urban Management and Finance

US-AEP's urban management and finance areas build partnerships between the United States and Asia with the goal of sharing best practices. As countries continue to identify areas in need of improved environmental management, US-AEP can assist with technical experts and capacity-building organizations.

US-AEP and its partners develop a variety of mechanisms to help Asian cities improve environmental management. The Urban Program supports associate building for city managers and leagues, and pairing of cities, to assist U.S. and Asian officials in sharing experience and expertise. Other efforts support the City Development Strategy of the World Bank, and work with Asian municipalities to establish environmental management systems. Supported activities lead to informational exchanges and technical assistance workshops among champions of urban management and finance -- whether U.S. or Asian -- and developing countries

Urban Services and Environmental Quality

US-AEP's efforts in urban services and environmental quality concentrate on air and water quality management, solid, medical and hazardous waste management, energy efficiency, and privatization support. These projects serve two purposes. First, they identify media-based solutions that involve citizens in efforts to improve environmental quality. Second, they assist in the creation of pilot projects that can transfer useful lessons and methods to other cities in the region facing similar problems.

US-AEP Focus Area

City Managers Associations

US-AEP is developing and supporting city manager associations and professional associations helping to provide a forum for municipal managers, NGOs, and environmental professionals to share experiences and build their capacity to improve urban environments. Examples include:

-US-AEP, through its partner organization the International City/County Management Association and USAID's Regional Urban Development Office, supported the development of the City Manager Association in the states of Gujarat, Andhra Pradesh, Karnataka, Tamil Nadu and Maharashtra, India.

-US-AEP was instrumental in efforts to establish two new international chapters of the Air and Waste Management Association in Singapore and Thailand. They will join four existing sections in Asia – Korea, Taiwan, Hong Kong, and the Philippines.

-In the Philippines, US-AEP has been very active in supporting the League of Cities, especially in their efforts to improve solid waste management to their 84 member cities. US-AEP has also helped strengthen the newly-created Solid Waste Management Association of the Philippines, which now boasts over 100 member professionals and local governments.

-In Indonesia, working closely with the Water Environment Federation, US-AEP provided assistance to the Indonesian Association of Sanitary Engineers in the creation of a wastewater treatment operator training and certification program.

The three focal areas of the Urban Program provide a continuous cycle from initial dialogue, to shared best practices, and development of programs to improve Asian environmental management. The lessons learned generate new urban environmental dialogue and new solutions.

To contact the Urban Program, refer to the contacts sheet in the back of this guide.

◆ Global Climate Change

Emissions of carbon dioxide, the major cause of global climate change, are rising more rapidly in Asia than in any other region. To help reverse this trend, US-AEP launched an initiative in 1998 to promote the efficient use of energy and materials by municipalities and industries, and to help industries, utilities, and municipalities adopt renewable and less carbon-intensive sources of energy.

The key to helping Asia produce fewer greenhouse gas emissions is to convince public and private decision-makers in the industrial and urban sectors that resource efficiency and clean energy yield economic benefits.

US-AEP also strengthens the ability of local NGO's, professional associations, and government agencies to make this case to industries and municipalities, while showing industrial and urban decision-makers how to become more efficient and use cleaner sources of energy.

◆ Industrial Programs

Industry is the lead sector in the Asian economies, yet for all the development only a fraction of the industrial capacity it will have early in the twenty-first century has been installed. Expanding industry places severe pressure on the environment in Asia, requiring new, innovative solutions to growing pollution problems. US-AEP's Industry Programs are helping colleagues and partners plan, finance, and manage responsible industrial growth, providing support for setting environmental goals, measuring progress towards a cleaner environment, and disclosing the progress made to the public.

The Industry Program supports proposals that strengthen regulatory and enforcement regimes, and promotes non-regulatory and voluntary programs that change industrial behavior. US-AEP also works with corporations and businesses to encourage compliance with environmental laws, improve performance through clean production and environmental management systems, and ensure they respond to market-based pressures to improve efficiency and stewardship. The



With US-AEP assistance, Mr. S.K. Tandon—president of Delhi, India's Anand Parbat Industry Association—implemented a cleaner electroplating demonstration project at a local facility. As a result, he says, “We anticipate a remarkable positive change in the way electroplating operations are done in this country.”

Industry Program supports a three-level approach to environmental management: environment protection, cleaner production, and sustainable practices.

Environmental Protection

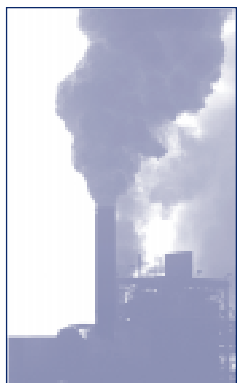
At the basic level, the focus is on encouraging local governments to provide basic environmental infrastructure. Environmental issues with immediate impact on human health are the central concern in this area. US-AEP supports efforts to improve environmental laws and enforcement regimes, corporate reporting and responsibility through compliance assistance, and improvements in urban waste management and air pollution control programs and abilities. The emphasis is on immediate environmental improvement by strengthening public and private institutions, increasing their capacity for effective action.

Cleaner Production

The next level is improving environmental performance at the firm level. Attention is paid to environmental and economic issues, and the response of individual firms to market-based demands and voluntary programs for improving environmental quality. The Industrial Program encourages and supports cleaner production and pollution prevention measures, acceptance of international standards for environmental management, such as ISO 14001, supply chain environmental management, codes of conduct, and financial due diligence, to move industry beyond basic compliance. US-AEP also supports programs that promote new performance drivers, tools, practices, and technologies that build stakeholder relations in Asian countries.

Sustainable Practices

The final level focuses on the industrial system as a whole, moving beyond the individual firm. It encompasses comprehensive approaches to environmental management that integrates environmental protection, economic growth, and social issues. The program supports efforts that



US-AEP is committed to improving the environmental management of the growing Asian industrial sector:

emphasize policy integration, sector-based industrial planning, new investment, corporate governance and responsibility, product stewardship, and sustainable consumption. US-AEP ensures Asian participation in the ongoing international dialogue on environmental standards and sustainable practices.

The Industrial Program is taking a long term, larger view of the industrial system and its impact on the environment in Asia. All nations are going to eventually move beyond concern with ameliorative actions and individual firms, to consideration of the systemic and holistic effects of industrial and economic development. US-AEP's Industrial Program is ready to help Asian nations and businesses integrate the best environmental management practices into development programs as their economies grow and mature.

To contact any of US-AEP's Industrial Programs offices, refer to the contacts sheet in the back of this guide.

Industrial Programs in action:

Industrial extensions for the environment

Right: Mr. Achmad Djani, executive director of the Indonesian Pollution Prevention Roundtable, is working with US-AEP to facilitate Indonesia's economic recovery. One such project is the Eco-Productivity Outreach Corps. Below: Corps members pose with owners of local metal fabrication factories during a May 1999 visit. Many of the 60 small and medium metal fabrication factories in this Central Javan village are participating in the program.



US-AEP focus areas • Industrial Programs

Industry is the leading sector in Asian economies and its expansion is placing pressure on the Asian environment through pollution and increased resource and energy use, requiring innovative solutions. US-AEP strategy emphasizes work in relevant industries, understanding important drivers, identifying champions in Asian industry, and developing a collaborative approach to sustainable development to reduce pollution and increase energy and resource-use efficiency, with significant benefits for Asian environments and economies.

With US-AEP's help, Ford Motor Co., Philippines, has 100% of their first tier suppliers participating in cleaner production, has mandated that all of their suppliers be ISO 14001 certified by December 2001, and has invested \$60 million in its suppliers to help them achieve the company's environmental and corporate responsibility goals. Nestle Philippines also enlisted US-AEP's assistance in reaching their cleaner production goals. US-AEP helped Nestle work with their 500 mission-critical suppliers to implement environmental management systems, and is continuing the effort to reach all 3000 Nestle suppliers in the Philippines and Asia.

◆TECHNOLOGY COOPERATION

One of the essential strategies that the US-AEP has employed to achieve its goal of promoting a clean revolution in Asia is to promote the transfer of US environmental practices, expertise and technologies through its Technology Cooperation program. The demand for innovative environmental products and services in Asia is high and will continue to grow in the near future as these economies continue to address a wide range of legacy environmental problems and address the challenges of rapid industrialization and population growth.

The US environmental industry is a dominant player in international markets. However, this is a dynamic industry, composed of many small and medium sized companies. These companies have the cutting edge technologies and expertise necessary to overcome particular environmental challenges, but they are often unaware of, or unable to capitalize on, the demand for their products and services. Through its unique approach of working with the US private sector, US-AEP is able to bring vital technology and expertise to Asia and at the same time has facilitated over 500 sales of environmental goods and services to the Asian markets since 1992. With a total of over \$1.3 billion in sales, that translates into over 26,000 American jobs according to Small Business Administration guidelines.

In Asia, to learn more about US-AEP's technology transfer activities, contact the Tech Rep who represents your country, as indicated on the contact sheet in the back of this guide. Or, in the United States, contact ETNA; see the contact sheet in the back of this guide.

Cumulative US-AEP-facilitated U.S. sales by country, as of October 2000:

Hong Kong	\$243,373,450
India	\$42,817,960
Indonesia	\$57,195,003
Korea	\$176,603,533
Malaysia	\$84,961,062
Philippines	\$74,311,569
Singapore	\$141,724,694
Sri Lanka	\$1,024,006
Taiwan	\$54,652,635
Thailand	\$246,593,941
Vietnam.....	\$7,800
Other	\$145,029,263
Total:	\$1,268,294,916

Arsenic poisoning from contaminated water supplies is a major health problem for the 6 million inhabitants of West Bengal. Working with the Central Ground Water Board and Rajiv Gandhi Drinking Water Mission, US-AEP identified two internationally recognized compact treatment systems for arsenic removal that meets the needs of West Bengal and the Rajiv Gandhi Drinking Water Mission. In 2001, \$ 4 million of water treatment equipment was purchased from Apyrun Technologies and Water Systems International marking an essential first step in providing clean water to millions of peoplwest India.

The transport sector in major Asian cities creates urban air pollution that directly causes thousands of cases of asthma and bronchitis, and premature deaths every year. Since 1998, with US-AEP's help, MD Laser Tech of Arizona has introduced their US EPA-accepted product aimed at monitoring the major pollutants from vehicular exhaust. The cities of Kuala Lumpur, Manila, Jakarta and Ho Chi Minh City have all adopted MD Laser Tech's monitoring technology allowing them to identify the sources of pollution and confirm the effectiveness of their air pollution control efforts.



MD Laser's Emissions testing van on display at the 2000 Air and Waste Management Association trade show. MD Laser uses this technology in four Asian cities to monitor air pollution levels.

Where we work

US-AEP focuses its efforts in 11 Asian priority areas, shown below.

-
- South Korea
 - Taiwan
 - Hong Kong
 - Philippines
 - India
 - Thailand
 - Vietnam
 - Sri Lanka
 - Malaysia
 - Singapore
 - Indonesia

As needs dictate, projects are also undertaken in other Asian countries.

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